RESEARCH MANAGEMENT IN AFRICAN UNIVERSITIES

Report of A Benchmarking Seminar Held In Durban, South Africa 1-3 April 2001

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INTRODUCTION

Research Management is a relatively new issue to most universities. Historically, although most higher education institutions have included the production of new knowledge in their mission, decisions about which topics to pursue, how to pursue them and what should be done with the results have been left to the individual academics. This has often been the case even where such work takes place in university time, and using university facilities.

This situation has changed drastically in the past twenty years, and the reasons have been largely financial. Sources of research funding have shifted from an overwhelming dependence on core funding to reliance on a much wider range of bodies – government, charitable and private sector – which allocate support on a competitive basis, and for specific projects.

The rise of project based research has led to a major shift in the relationship between academics and their funders, to one which inevitably involves the central university. As the number and central importance of funding bodies increases, staff need guidance on the opportunities available and how to apply for them to best effect. Once projects are approved, they are subject to increasingly complex contractual arrangements. Individuals need advice on the appropriateness of these, institutions need to be sure that their staff are not incurring unreasonable legal obligations and funding bodies need to be assured that their support is being used for proper purposes. The costing and pricing of projects has also become more complex, and universities need to calculate the full impact of such work on the institution. Finally, where research leads to results of general interest or commercial value, universities will need to ensure that it is being used for the public good, or that adequate recompense is being made for intellectual property which passes into private hands.

These developments have not affected all Commonwealth countries equally. They have been most prevalent in those countries, such as the UK, Australia and Canada, where the range of potential funds is greatest and existing research is best developed. However the same pressures are now being felt in developing countries also, as universities are being required to diversify funding sources amidst increasing realisation that the state alone will not be able to maintain an adequate research base. In these cases, the notion of a central research management activity is only beginning to take root. Even in the 'old Commonwealth' countries most affected, where such offices have been established in most universities for more than a decade, there is little confidence that the right mechanisms have yet been found.

It was against this background that the Association of Commonwealth Universities, with support from the UK Department for International Development, decided to launch a major initiative to support the research management function of its member institutions. The programme will focus on sharing best practice between universities, encouraging better communication between higher education and funding bodies, and providing basic materials for those with little or no tradition of research management to develop at least a basic capacity.

The Report publishes the results of the first programme seminar, held in Durban from 1st-3rd April 2001. The seminar brought together representatives of eleven universities – five from South Africa and six from elsewhere on the continent, deliberately chosen to reflect

different levels of current provision. The purpose of the event was twofold. First, it gave participants an opportunity to benchmark current activities in detail, and identify specific areas for development. Second, it provided the programme organisers with valuable insight into the current level of activity and barriers to further progress. A third, and very welcome outcome, was the decision of participating universities to form a South African network to continue discussions on a more permanent basis.

That these goals were achieved so comprehensively is due to the efforts of several people. Particular thanks are due to the staff of the University of Natal, especially Eleanor Preston-Whyte, Diana McCann and Jasmine Sultan for recruiting participants and handling all of the local arrangements, and to the Vice-Chancellor, Professor Brenda Gourley, who found time to join us on our first day. The seminar also benefited greatly from the participation of John Fielden, of the Commonwealth Higher Education Management Service, whose expertise of benchmarking was vital in drawing out the detailed statements of good practice which formed a major outcome. Most of all, however, our thanks go to the participants themselves, whose enthusiasm and input made the event such a success, and persuaded us that the Research Management programme has the potential to fill major gaps in current participation.

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KEY RESULTS

The Benchmarking Process

The seminar primarily aimed to assist participants in developing strategies towards research management at their own universities. In doing so, it sought to identify a number of key generic issues that other institutions could use in developing their own services. The mechanism for achieving this was a model previously used in the ACU's 'benchmarking' programmes for Commonwealth and European universities, which have been offered for some years through the Commonwealth Higher Education Management Service (CHEMS).

Prior to the seminar, participants were asked to complete a detailed questionnaire. This sought to establish the current level of research management (and research activity generally) within their institutions. Equally important, it sought comments on the barriers to further progress and examples of initiatives which had proved successful. From this information, the organisers selected a number of key statements and approaches which formed the starting point for discussion in each of the main conference headings.

The ideal outcome of each session was a series of 'good practice statements', which should be considered by any institution in developing future strategy. Although these won widespread acceptance from those present, it is emphasised that they have not been implemented in every case, and that it many institutions a range of factors existed which might prevent their achievement in the near future. They do, however, provide a 'checklist' of policies and activities which can be taken into account, and adopted or rejected as appropriate.

This process was carried out under five headings – the development of *policies and structures* at institutional level, the role of *central support services* for research and consultancy, the *management* of external projects, strategy towards *intellectual property rights* and the management of *external links and marketing* of research and consultancy services. The 'good practice statements' emerging from each of these are given below.

Change and Transformation at an African University: Makerere

The opening session heard a direct example of a large-scale project in research management with a presentation from Dr Jotham Musinguzi, Director of the Population Secretariat in Uganda. Dr Musinguzi talked about the transformation process that is currently underway at the University of Makerere as a result of funding provided by the Rockefeller Foundation for projects to assist with a national process of decentralization. Dr Musinguzi described how this process was organised by a panel made up of representatives from both the University and the Central government, which decided on a programme to implement decentralisation measures. This included primary research into the human resource needs in districts as well as programmes to meet these needs. Dr Musinguzi described the processes used to alert academic staff at the university to the opportunities, such as large scale briefing meetings, and how proposals were then evaluated on a competitive basis and funds distributed. The issue of how results would be assessed was also highlighted. Dr Musinguzi concluded with a summary of the internal constraints that had arisen during the process and described how funds had been used to produce systemic change in the university, which would be sustainable after the project had ended.

Benchmarking Sessions

POLICIES AND STRUCTURES

In this session the delegates looked at polices and structures to support research management. Beginning with a discussion of different types of research from 'blue skies' research to applied research it became apparent that there was some diversity amongst the delegates; some came from offices that dealt with all types of research with others focusing entirely on project based contract research. However linkages between the different types were highlighted. For example, it was suggested that a good reputation in 'basic' research in a certain field would be important in attracting external contracts for more applied research in those areas. It was agreed that while it was important strategically to consider all types of research, for the purposes of the workshop it would be advisable to concentrate on the management of applied project-based research. Delegates discussed the current state of policies and structures in their institutions and attempted to come up with good practice statements that might constitute an ideal situation, suitable for all to aim towards. These are listed below along with a summary of the issues discussed in each section.

A strategic aim is to promote income generation actively and to achieve at least full cost recovery

All delegates agreed that there was increasing impetus for staff to carry out more income-generating research. A number of the institutions had received less government funding and were expected to generate a large proportion of income themselves through research and consultancy. It was considered that it was important that income-generating activity was not simply facilitated through structures but actively encouraged through the university's strategic plan. With regards to profit it was pointed out that there was a need to consider other non-financial benefits that might accrue to the university through research activities. However all delegates were agreed on the importance of achieving at least full cost recovery so that the institution did not make a loss, acknowledging that this was sometimes not the case at present. In terms of consultancy and income-generation delegates discussed the current situation with regards to whether staff are, or should be, compelled to disclose consultancy and to give the university a percentage.

Income generation programmes of departments are expected to fit into the overall university strategic plan and the annual plan and budgets.

Participants agreed that it was important that income generation was viewed in the context of the overall university strategy. In some institutions this was already done with each department being required to write a strategic plan on income generation to fit in with the university's strategic plan. There was also some feeling that "third stream" income generation should be recognised as core income rather than a bonus and this added to the feeling that integration with the overall institutional plan was essential. It was acknowledged that it would be important to address concerns academic staff may have that increased income generation may result in overall budgets being cut.

Contract research is expected to bring benefits to teaching and HR Development

The issue of the relationship between income generation and human resources was then discussed. Experience was shared where the imperative to generate income had fed into

the need for increased human resources in some institutions. The issue of whether all staff should have the capacity to generate income was raised along with the response from some institutions that their primary concern was to employ good teachers. It was agreed that the experience of contract research could be in support of research and teaching. For example, it was suggested that graduate students might be more attracted to institutions with a strong record in contract research and also that reports from contract research submitted to the institutions library could be used for teaching purposes. It was suggested that where contract research was not in support of other activities this should be reflected in a higher costing.

Effective Research management requires specific skills that will need to be developed through Human Capacity Development at the institutional level

Delegates agreed that it should be acknowledged that specific skills are needed to enable staff to engage in income-generating activities and that therefore attention would need to be given to developing these.

Income generation activities should not endanger the core teaching and research functions of the University.

It was agreed that that concept-led research and teaching define the University and that income generation should not be carried out to the detriment of this. Also that ethical issues are important in deciding what research is undertaken. The point that income-generating research could however be used to support central functions was again made.

It is essential to make academic staff aware of policies by every available means at regular intervals.

There was general agreement on the importance of effectively communicating policies to academic staff, ensuring that a variety of channels of communication are used and that this is done repeatedly and regularly to ensure policies are understood by all.

University of Botswana

Cliff Studman of the University of Botswana gave a presentation in this section describing the existing and planned structure for research management in his institution, incorporating the enhanced role that the Research and Development Unit would play in providing central support for research. The RDU would fit in with existing structures, reporting to the Deputy Vice-Chancellor for Academic Affairs, but would also greatly increase centralised support with planned managers for commercialisation, new programmes, government co-ordination, information and quality. Professor Studman also talked of the importance of co-ordinating research activity in accord with the University's strategic plan and mission and also the Governments long term vision for the country's development.

A central support unit reports to a Deputy Vice-Chancellor (either academic or research depending on size). If the reporting line is to a DVC Research then links must be maintained with the DVC responsible for Teaching

Delegates shared experience of different organisational structures and the reporting lines of the research office. In some institutions this was to a DVC for Research and in others this was to a DVC for Academic affairs. The importance of having linkages with the DVC responsible for teaching was agreed so that activities could be synchronised and mutually supporting.

An advisory board can be used (with members from Government and industry) to help the central unit

Delegates agreed that advisory boards might be helpful to a central unit, for example, the advantages of having an advisory board with a sympathetic representative of industry and lay members of the council were discussed.

It is important to link to the Research Committee, ideally through the Deputy Vice-Chancellor.

It was suggested that it was useful to have links with the Research Committee as this may make decisions on identifying areas of research excellence that may impact on the priorities of the research office. Such a link also enabled the office to have some input into the allocation of internal resources in support of research, or at least knowledge of decisions taken in the area.

CENTRAL SUPPORT SERVICE FOR RESEARCH AND CONSULTANCY

This session was concerned with the structure of central support for Research and Consultancy and the specific services which can be provided to academic staff and external customers.

University of Cape Town

Tony Heher gave a presentation at this point describing the process through which external projects are managed at the University of Cape Town. Three offices are involved in central provision of services, a Post-graduate Support office, Grants office and an Office of Industrial Liaison (OIL) directed by Dr Heher. The management of projects also involves the central finance office and the development office. Dr Heher described how primary marketing is often done by the researchers themselves but that the details of the contracts are usually managed by OIL which comprises six members of staff authorised to sign contracts up to R500,000. Dr Heher also described the computerised system onto which contract details are loaded which stores information on when to invoice funders and what deliverables are required before payments are made. It is the aim of the office to move from passively administrating smaller contracts to pro-actively seeking out large contracts and organising UCT's bids for these.

Ways are found of alerting researchers to opportunities

Delegates agreed that market intelligence was of paramount importance and a number of the delegates expressed dissatisfaction with the way in which this was currently operating. Various means of improving this were discussed including the use of software packages available for alerting users of funding opportunities and activities such as seminars on funders priorities. Delegates agreed that of equal importance to discovering opportunities was ensuring that information was directed efficiently to the researchers who may act on these. It was agreed that all possible channels of communication should be used including email notification, written circulars and notice boards.

Flexible, responsive support is available to help proposal writers with technical aspects of bid writing.

Delegates agreed that it was important to provide assistance in putting together proposals as this was often an area where academics were weak. Difficulties in providing generic training due to the different requirements of different funding bodies, such as the logical frameworks required by the EU, were highlighted but it was felt that there were some generic skills involved in bid writing which could be usefully addressed by training courses.

In addition, the existence of specialized agencies for administering grants from particular donors were pointed out and there was a suggestion that ACU should identify these and possibly form partnerships.

The Central unit may need to co-ordinate and support the production of large multi – disciplinary proposals.

It was suggested that the Research Offices could play a useful role in helping to co-ordinate multi-disciplinary teams that were increasingly required by large scale projects and assist these teams in putting together research proposals.

Standardised processes for calculating costs and overhead rates are prepared by the central unit and advised to all researcher for use in proposals. These should distinguish between central and a range of departmental overheads.

Delegates agreed on the importance of being able to accurately cost research projects. It was acknowledged that this was sometimes a weakness with overheads and indirect costs often being unaccounted for. When the cost to the institution was known then a decision could be made as to whether to charge above this (for profit), or aim for full cost recovery, or, perhaps in cases where the project had inkind benefits, charge less than this. Representatives from Natal discussed their costing formula which involves charge out rates for each category of work and each school and also incorporated human resource support into the cost: overheads were defined as people and all other costs were seen as direct costs. Two sets of overheads were charged, one for the school and one for the university. The fact that a lot of money was fed back into the school acted as an incentive to carry out research projects and to ensure that they are accurately costed.

Staff undertaking work for the University should be covered by professional indemnity. Clear distinctions needed to be drawn between these circumstances and cases where work is undertaken privately, and wholly outside the university system.

The issue of whether or not staff should be covered by professional indemnity was discussed. In some universities this was spelt out in conditions of service and in others staff were not allowed to consult privately. There was concern, however, that unless formal disclaimers were obtained from clients, then institutions could be held liable for the activities of their staff, even if they had no knowledge of these, and received no benefit from them. On a more positive note, the availability of insurance cover could be marketed to staff and clients as a positive benefit of routing work through the university system.

A genuine central function is to check all proposals on contractual matters before they are sent out.

Delegates agreed that it was important that when work was carried out through the university, for which the university would be liable, that a central office should intervene in the early stages to check contractual matters and certainly before a contract has been drawn up. Some institutions present stressed that they could not meet the costs of taking all contracts to lawyers but it was agreed that legal details should be at least checked by a central office and that preferably this office should be responsible for drawing up the contracts. One institution commented that they tried to encourage faculties to inform funders that the central unit would draw up the contract and their office held proformas for this purpose.

Institutions will need to clarify their ethical guidelines an accepting contracts and apply them before signing

It was agreed that there was an increasing need, with the growing scale and scope of contract research, for ethical issues to be clearly spelt out. In addition to the universities ethical stance, the question of the ethical requirements of some funding bodies was also highlighted. While some institutions had ethics committees for certain fields, such as medical research and research using animals, others had no ethics committees at all. It was agreed by all that guidelines were important.

Final contracts are signed by a competent central office but signing powers may be delegated if stringent guidelines have been followed.

It was acknowledged that where all contracts had to be signed by senior management this could often cause delays. In some of the institutions present the central office was authorised to sign up to a certain level. In other institutions contracts had to be first be checked by the central office before they could be signed. It was agreed that the process may be speeded up if check lists of recurring issues could be drawn up and if signing could be suitably delegated.

MANAGEMENT OF EXTERNAL PROJECTS

It was quickly recognised that, however efficient, central research offices could not control all external projects on a day to day basis. Nor would it be desirable for them to do so. This session looked at the need for management across the institution and examined what central offices could do to encourage could practice more widely.

The University seeks to ensure project leaders are effective managers and have appropriate administrative backing.

Delegates shared experience of how research projects are usually managed. In some cases projects were managed by the Head of the Department involved with administrative help and in others academics manage the projects themselves using postgraduate students on a part-time basis to assist. The problem was highlighted that where the project manager is also involved in the research this may lead to conflicting calls on their time. Delegates agreed that it was therefore important to ensure that adequate training and support, especially in administration, is given to project leaders to enable them to manage projects effectively.

There is an effective system for monitoring completion of reports and agreed timelines and budgets.

The issue of how the progress of projects is monitored was then discussed. Some institutions had fairly complicated systems such as UCT's SAP system whereby 'deliverables' were loaded into a system linked to the finance office. Other institutions expected six-monthly reports on progress and stopped grants if these weren't received. This led into the issue of who should be responsible for making sure project targets and deliverables were met. Some of the delegates felt this should be the Head of the Department carrying out the research.

An information system is needed to capture all the university's external contracts, projects and donor grants. This is accessible to appropriate senior management.

Delegates were agreed on the necessity of a centrally held information system that could be accessed centrally so that senior management could be kept informed of projects underway. This would require information from various offices such as finance, and possibly any office in charge of donations.

Clients are surveyed to ascertain their satisfaction with the administrative and professional performance of projects.

Looking at different methods that may be used to check whether clients are satisfied with work done, some delegates reported that clients were asked for feedback when they were sent the final report, in other cases clients were sent draft reports and asked for input. However this was done mostly in the case of consultancy and there was general agreement that there was a pressing need to survey client satisfaction more broadly. It was felt that as contracts were increasingly professionalised, industry would be looking more closely at deliverables and that perhaps there may be a role here for quality assurance units that have developed in some institutions.

The university has guidelines on the respective responsibilities of the researcher and the university.

With regards to the distinction of the various responsibilities of the researcher and the university there was some divergence among the delegates: in some cases this was unwritten and based on convention, while in others there were clear guidelines.

The University acts with the funder to put right any problems which arise in the operation of projects.

Delegates agreed on the importance for the university to take remedial action where clients were dissatisfied, where reports were not received and targets not met.

INTELLECTUAL PROPERTY RIGHTS

It emerged from the discussion that the issue of Intellectual Property (IP) is a very sensitive issue. A quick survey of the universities revealed that the majority of them did not have any firm policy in place yet, while about 20% indicated that IP Rights lies with the university. It was agreed by all that an understanding must be reached and detailed in the contract as to who owns the rights.

University of Stellenbosch

The model which the University of Stellenbosch operates on is quite simple: there would be a 50% split between the university and the researcher. When an academic makes new findings or invents a new product, he is obligated to declare this to the university. The inventor is responsible for ensuring that all progress steps leading up to the invention are logged in a detailed manner and that the actual date of the invention is noted. The university will then undertake an investigation to determine if the invention is in fact 'real'. The university has first option to the product. If it is not interested, the inventor is informed and all rights revert to him/her and he/she is free to license and commercialize the product.

In agreeing and then applying intellectual property policies, the university works collaboratively with the academics, students and external bodies concerned.

It was agreed by all delegates that it is vital for the university and its researchers to maintain a harmonious relationship. By working in this co-operative manner, both are able to exploit the fruits of an invention.

Universities have policies, which are widely publicised and incorporated in conditions of service and student regulations, and these cover equitable sharing of proceeds that provide incentives to all parties.

The university should ensure that prior to any research being undertaken, the policies governing the sharing of IP are widely publicised to the university community. Ideally, IP rights should be stipulated in the contract to safeguard both the researcher and the university. An agreement should be reached which would explain the percentage of royalties each party is to receive. The same principle would apply for postgraduate students who undertake research. Such rules should be clearly stipulated in the students handbook of regulations.

A few universities felt that they had little real understanding of the policies and procedures governing IP. It was suggested that the ACU website has a 'bank' which stores policies that some universities deposit and others can make use of. This could then be used as a starting point in developing procedures.

Intellectual Property policies are covered in staff induction programmes and support and advice services to inventors are made widely known.

It is vital that new and old staff are made aware of IP policies through staff induction and regular support programmes for researchers. Policies and procedures could be distributed in hard copy format, or made available on the department's website.

A network of research co-ordinators or 'champions' at department level is used to help create an awareness of IP issues and identify its creation, and in addition formal presentations are regularly made by the central support unit to key faculties.

It was suggested that individuals who are interested in IP policies be identified at faculty level. These individuals would be affiliated to the faculty Research Committee and help create awareness around the subject of IP rights. Regular workshops will be co-ordinated to discuss IP and clarify any misconceptions. Formal discussions and presentations would also be made to all departments.

There are policies and mechanisms for exploiting any filed patents and commercial opportunities.

Universities need to have a general strategy in place for exploitation of any patents or other commercially viable intellectual property which emerges. This might involve investment by the university itself, where the necessary resources and expertise are available, or a facility for setting up joint ventures with commercial operations. Where resources to maintain and defend the patent are likely to be a problem, an alternative strategy might be to assign rights to a commercial partner as quickly as possible, in return for a share of revenue. Such an approach would require safeguards, to ensure that the partner actively invested in the project.

It was suggested that in some circumstances researchers use defensive publishing to protect their invention. In this way they are able to prevent anybody else from laying claim to it and ensure results were available for further research work in the public good.

EXTERNAL LINKS AND MARKETING

All delegates agreed that universities should be as pro-active as possible in marketing both research capacity and the results of research undertaken. It is very important to promote the university firstly on the basis of its own reputation, secondly through all forms of media be it television or radio and also through publications to its alumni. All methods should be made use of to disseminate results of research that is being conducted and the outcomes of workshops and meetings should be published as widely as possible. This activity should be targeted so that not only the wider community, but industry and government is made fully aware of the various functions undertaken by the university.

The university establishes an advisory support service in the heart of its community.

It was pointed out that the university should establish a harmonious relationship with its community. An equilibrium should be maintained where the university and community are equal partners in this relationship. This of course would encourage the community to trust and support the university in any research undertaken. An initiative which has had

much success was undertaken by the University of Science and Technology in Kumasi, Ghana. A self-sustaining Information Technology Transfer unit (ITT) was built in the heart of the community. The unit, which is staffed by members of the community and university enables technology to be transferred at grass roots level almost immediately. This obviously benefits the community because they are the recipients of this research, and fosters greater relations between the two.

Community service is used to identify research programmes that meet the community's needs.

Because a relationship based on trust has already been established, researchers from the university will have the full co-operation of the community when projects are undertaken. It was suggested that some type of community service be made compulsory for all academics. Through this service, the university will be able to identify any problems in the community and conduct studies to solve these issues. Each faculty should therefore report not only on teaching and publications, but also community based research and development. It was suggested that industry and organizations would be more willing to fund research that has positive and beneficial implications for a community. In this way other communities would be able to adopt some or all of the outcomes of the research.

Projects have users involved during their work and in the production of reports for those who will benefit- taking style, language and audiences into account.

It was unanimously agreed that the ultimate beneficiary of the research is the community. But, the question of methods of publicising the outcomes of the projects arose. The responsibility lies with the university to make the results of projects available to the lay person as well as the academic, industry and media. It was recognised that the lay person might experience difficulty in understanding the jargon used in report writing. One approach would be to involve external people in projects as closely as possible. This could both encourage a sense of empowerment and further promote the work of the university to new groups.

Where Research Projects are designed, they include a strategy (and funding for) full dissemination.

It was pointed out that publishing and full dissemination of any research is vital to ensure that outcomes are utilised to the full benefit of the community, industry and/or the education sector. However problems arose in determining who should take responsibility for this. One suggestion was for dissemination activity to be delegated to another department. Here booklets and brochures containing all technical information would be published. All delegates agreed that the researcher should accept full responsibility for all papers published. The onus lies on the academic to ensure that he is able to communicate his findings to individuals at all levels. It was also suggested that reports should be translated into the local languages. Through this it would be possible to work with people in rural communities as well, encouraging them to disseminate this knowledge.

Big Issues

In addition to the principal benchmarking sessions, several key issues arose out of the seminar which were thought worthy of further consideration. Although the final session was devoted to identifying these and preliminary discussions, it was recognised that time would not permit the detailed analysis required. The topics are listed here as a matter of record, however, and in the hope that they will receive further attention within individual universities.

- **What performance indicators could be used to allow institutions to evaluate the activities of research management?**

- **What incentives could be used to overcome individual and departmental resistance to perceived central 'control' of their activities?**

- **How can universities preserve an appropriate balance between traditional research activities, contract research and consultancy work?**

- **Is there a problem in Africa because of low basic salaries encouraging staff to undertake contract research and consultancy work rather than traditional basic research?**

- **How can we produce sensible measures of outputs of applied research and consultancy to compare with the traditional measure of publications for basic research?**

- **What can universities (and Research Management office) do to improve recruitment and retention of young researchers and to develop their capacity?**

- **How can traditional financial and human resource systems be better integrated with the needs of income generation activity?**

- **What range of skills is essential/desirable in the research management office itself?**

A suggestion in the area of performance indicators was the establishment of regular benchmarking sessions between universities. At these, universities would be able to compare and contrast methods of bidding for funds, IP policies and the number of contracts that are won. Another measure of the success of the Research Office is the increasing number of researchers conducting community work. Another indicator that could be made use of is developing a scale which would evaluate internal and external customer satisfaction

Suggestions under the area of incentives included: clear and open policies for sharing the benefits of contract research; simple and user friendly systems; access to advice and ICT equipment; accurate information on costing and on the current fees/ market rates for consulting; access to information and contacts with commercial funders and donors.

The question of balance generated a lot of discussion. Some of the institutions felt very strongly that basic research was still very important in their development as was teaching

but they also acknowledged that funding for this was a problem. It was suggested that funds generated from contract research and consultancy could be used to support basic research and teaching. Better recovery of indirect costs (or 'overheads') was one means of achieving this. It was felt by some institutions that it was important that all consultancy work went through Heads of Department so that the amount could be monitored and an effort made to maintain balance and to ensure that basic research and teaching were not neglected.

The discussion moved on to the question of measures of output and whether the traditional tying of promotion to publication was appropriate. Some institutions felt that this served to maintain the balance and ensure that basic research was not neglected. It was questioned, whether, in the light of shrinking funds for basic research, this was a fair or appropriate way of assessing performance. It was felt by some that there should be some way of assessing and rewarding teaching also. With regards to contract research the delegates discussed how this could be assessed and rewarded. In some cases papers and inventions resulted from externally funded research. Some institutions confirmed that they do give consideration to externally funded research projects in promotion criteria but that a lot of emphasis was nevertheless placed on publishing in international publications.

CONCLUSIONS & NEXT STEPS

The involvement of such a wide range of institutions in our initial seminar represented something of a risk. Well before the event, we were acutely aware that participating universities ranged from large, historically well endowed institutions with the personnel, facilities and resources to conduct leading edge research on an international scale, to universities for whom the provision of basic materials and resources, and retention of high quality staff were recurring problems.

It quickly became clear that this risk was well justified. Despite the inevitable gaps in their resources and existing provision, participating institutions shared a clear recognition of the importance of our agenda, both for the development of the universities themselves, and their more effective contribution to their respective societies and economies. Moreover, the basic issues underlying the seminar were common to all. How can universities maximise the research resources that they have available? What assistance can be provided to staff to find partners and funding, and ensure that their ideas have the most impact possible? Above all, what role is it realistic and desirable for institutions to take in areas that have historically been seen as the province of the individual?

Those charged with the responsibility of establishing research management policy within universities – in developed, as well as developing countries – quickly feel a sense of isolation. Within their institutions, they are often small units, sometimes seen as peripheral to the main business of *doing* research. Externally, they are not always welcomed by 'clients', who may regard them as interfering in well-established relationships with individuals. Even the capacity for sharing experience between practitioners is sometimes limited by the perception that universities are essentially rivals in the business of attracting external funds.

On the first two of these points, the seminar hopefully gave participants confidence that these problems were not specific to any single institution. Moreover, if the experience of the United Kingdom and the United States is any guide, they will decline rapidly as the research function becomes established. In a reversal of the policies of some twenty years ago, many British companies now *insist* on conducting their dealings with universities through central offices, in the knowledge that they will then have the protection of dealing with an institution, rather than individual. On the third point, the seminar showed vividly that whatever their rivalries in specific cases, universities have much more to gain from sharing experience in the field than they have to lose.

A specific outcome of the seminar was recognition by participants of the need for a formal network for collaboration between universities in Southern Africa on the issues covered. It is understood that this is to be launched in October, and will involve a much wider network than the institutions established at the seminar. The new organisation might also provide the facility for member universities to forge relationships with other international bodies in the field. Two had already been represented at the Association of University Technology Managers Conference in New Orleans, and others expressed interest in the Society of Research Administrators Conference planned for Vancouver in October.

The new organisation will hopefully provide a forum for continuing participation by member universities in the ACU's own research management initiative. In this context, the seminar also fulfilled its purpose of helping the organisers identify future activities. The final session, which enthusiastically endorsed the programme aims, identified the following possibilities for further development:

- conducting an international survey to establish the extent of central research management provision in all ACU member universities
- establishing an electronic 'library' of institutional policy statements in relevant fields, which could be referred to by universities in developing their own policies
- establishing a project web site, which includes the facility for member universities to post questions and engage in direct discussion with colleagues in similar roles elsewhere
- establishing direct links to key international bodies, who may value the opportunity to communicate with a large body of university officials directly
- highlighting the importance of research management in universities to government, with a view to their providing direct support
- organising further seminars, to develop the findings of this initial venture, in other parts of the Commonwealth, and sharing the results
- re-visiting participants in the current seminar in, say, three years time, to evaluate how far they had been able to move towards the 'statements of good practice' identified, and what barriers had been experienced to further progress

Above all, we hope that the seminar demonstrated that research management is not only a legitimate activity of the university, but a profession in its own right. The issues involved drew on several different areas of traditional university administration – finance, human resources, marketing, registry and resource allocation. But there was widespread agreement that they were too complex to be handled by officials in those areas on a 'part-time' basis. This, together with the pressures on funding outlined at the start of this report, suggest that research management is a topic that can only increase in importance over the next few years. We hope that the ACU programme can play some role, however, modest, in helping this process develop.

Appendix 1

<u>Presentation by Peter Mackie</u>

As an example of the type of tool which can be used to assist Research Management on an institutional level, Peter Mackie, an independent consultant, was invited to describe a system which he has recently developed for the University of Natal

The University Office© information management system is a three module system which can be used as a comprehensive, web-based system, accessible to selected categories of users, including potential clients, funders and research collaborators, as well as an internal administrative organizational management tool, accessible to managers, administrators and researchers. The entire range of research information management from recording and reporting on all projects, grants and donations to calculating budgets, to recording the progress of negotiating and finalizing agreements and contracts, and archiving all information relevant to each project is contained in three linked databases. Access to the system is controlled by strict security.

University Office© is available also as three separate databases:

- The Expertise© system is web-based.

- The Applications© and

- IP© (Intellectual Property Management) systems can be run on stand-alone or networked PCs.

The Expertise, URF and Publications databases have been developed with various other universities, including the University of Natal.

Applications© is a database in which the details of all pre-award proposals and funding applications can be stored and the recording of actual awards and contractual obligations can be kept. The system has an archiving facility that allows for electronic storage of all documents pertaining to every project or grant. The system also has a very sophisticated costing and budgeting module, which automatically calculates in the institutional overheads and any other standard charges to projects after the basic costing has been input. The system is normally run within the research administration office, but <u>read-only access</u> can be given across the network to researchers and to all administrators responsible for project administration across the organisation. It is possible to set up standard reports within the system, and the system has an efficient progress tracking facility.

Expertise© is a relational database, with a large number of fields in which extensive data on researchers, their areas of interest/expertise, their past, current and future research projects and awards, and their publication records can be stored. Much of this data can be put in and updated by the researcher from his/her desktop. Filtering and validation of data can be undertaken by research administrative staff, and by way of keyword search facilities, administrative and management reports can be drawn as required. **Expertise©** can also be used to publicise academics' expertise and areas of research interest on the university's World Wide Web site.

IP© is a database in which all information pertaining to the agreements about intellectual property ownership and confidentiality undertaken between the employer, staff members,

students, external clients, and investors can be managed. All information required to establish and track the patenting, licensing and royalty income expected and received, can be also stored in this system.

Peter Mackie may be emailed at: UNIVERSITY_OFFICE@compuserve.com for further information.

Appendix 2

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University of Namibia	Windhoek, Namibia	Prof Aggrey Abate Co-Ordinator: University Central Consultancy Bureau	Alabate@unam.na
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